

**REMARKS**

Applicant notes with appreciation the Examiner's acknowledgement of Applicant's claim to priority under 35 U.S.C. §119.

The Office Action makes no mention of the drawings. Applicant respectfully requests that the Examiner indicate in the next Office Action that the drawings have been accepted.

Applicant further respectfully requests reconsideration of the present application in view of the foregoing amendments and in view of the reasons that follow.

This amendment adds, changes and/or deletes claims in this application. A detailed listing of all claims that are, or were, in the application, irrespective of whether the claim(s) remain under examination in the application, is presented, with an appropriate defined status identifier.

Claims 24 and 25 are being added. These claims find support in the specification at least at paragraphs 47-50 of the original application, as well as in original claims 1-8. Claim 24 includes elements of claims 1-3, 6 and 7, and addresses printed circuit boards with 2N surfaces, where N is an integer greater than 2. Claim 25 is similar to claim 24, additionally addressing circuits with return circuit lines comprising windings wound opposite to the primary windings. The latter element is similar to subject matter claimed in non-elected claim 8, but is respectfully submitted to be examinable as a combination of an allowable generic claim (24) reading on the elected species, comprising an additional element. That is, claim 25 is not in a species/species relationship with claim 24, but rather in a subcombination/combo relationship. After adding the claims as set forth above, claims 24-25 are now pending in this application.

Claims 1-3, 6-7 have been cancelled without prejudice in order to expedite the prosecution of new claims 24 and 25, which are of different scope than any of the previously presented claims. Applicant reserves the right to reintroduce the cancelled claims or claims of similar scope for examination at a later time or in a related application.

Since claims 24 and 25 include many of the recitations of cancelled claims 1-3 and 6-7, the issues brought up by the Examiner in the last Office Action will be addressed as they might have been applied to the new claims 24 and 25.

The Office Action at page 2 rejected the then pending claims under the doctrine of obviousness-type double patenting over claims 21-23 of U.S. Patent 6,822,547 to Saito, *et. al.* (Saito ('547)). This rejection is respectfully traversed.

In order to reject an application under the doctrine of obviousness-type double patenting over a prior-filed issued patent, the Office Action must establish a *prima facie* case that the claims of the present application, although not identical to the claims of the patent, are obvious variants thereof. *See* MPEP §804(II)(B)(1).

The Office Action at page 2 acknowledges that claims 21-23 of Saito ('547) are different from the cancelled claims in the "arrangement of the printed circuit board" and the "addition of the return circuit line". It is respectfully submitted that the bare assertion of the Office Action, at page 2, that the differences over Saito ('547) are "obvious design choices", without supporting evidence, is not sufficient to establish a *prima facie* case, *see* MPEP §706.02(j) and 2142 ("The examiner bears the initial burden of factually supporting any *prima facie* conclusion of obviousness.").

It is also respectfully submitted that at least these differences make newly added claims 24 and 25, patentably distinct over Saito ('547). Specifically, claims 24-25 are at least patentably distinct over claims 21 and 22 of Saito ('547) because they disclose multiple windings (the arrangement of which is not taught in the prior art) and because the device in claim 24 operates on a different principle to suppress magnetic interference acting along the axis of the test conductor. That is, while the two magnetic windings of the device in claims 21 and 22 of Saito ('547) are mirror images of each other, thus canceling the voltages induced by changing magnetic fields acting along the axis of the test conductor, the windings of the device in claim 24 instead rely on the return circuit line for the induction of voltage equal in magnitude but opposite in phase to the voltages induced in the windings. This principle is explained in the present application at ¶¶ 9-13 and ¶¶ 58-59. The latter two paragraphs relate

to embodiment 2, and are analogously applicable in that two of the coils of that invention are oppositely wound, such that the induced voltages due to axial magnetic interference cancel.

Both claims 24-25 are respectfully submitted to be patentably distinct over claims 21-23 of Saito ('547) due to the arrangement of circuit board surfaces and the addition of multiple windings. These differences are submitted to be in and of themselves patentable distinctions, due to the increase in induced voltage created by the particular arrangement of circuit board surfaces comprising multiple windings that the Applicant disclosed in the present application at least at paragraph 47.

Furthermore, it is respectfully submitted that the double patenting rejection over claims 21-23 of Saito ('547) is inconsistent with the Office's restriction/election requirement in this case, where the Office Action of March 2, 2005 found six patentably distinct species. *See* page 2 of the March 2, 2005 Office Action. The patentable distinctions between Embodiments 3 and 4 are perhaps relevant. The Examiner's findings there relate to Figures 8 and 9, which principally disclose differences in the arrangement of layers, the multiplicity of windings, and the arrangement of return lines, all of which are also differences over the claims of Saito ('547).

In the face of these findings in the restriction/election requirement, which would appear to indicate patentable distinctions over Saito ('547), a greater showing is required to establish a *prima facie* case. *See* MPEP §2142 ("The ultimate determination of patentability is based on the entire record, by a preponderance of evidence, with due consideration to the persuasiveness of any arguments and any secondary evidence."). Respectfully, this showing was not been made in the last office action. More specifically, the Examiner has not pointed out how the patentably distinct differences between the species in the restriction/election requirement are distinguishable from the differences of the present claims over Saito ('547).

Applicant thus respectfully submits that the rejection was improper and further believes that the present application is now in condition for allowance. Favorable reconsideration of the application as amended is respectfully requested.

The Examiner is invited to contact the undersigned by telephone if it is felt that a telephone interview would advance the prosecution of the present application.

The Commissioner is hereby authorized to charge any additional fees which may be required regarding this application under 37 C.F.R. §§ 1.16-1.17, or credit any overpayment, to Deposit Account No. 19-0741. Should no proper payment be enclosed herewith, as by a check being in the wrong amount, unsigned, post-dated, otherwise improper or informal or even entirely missing, the Commissioner is authorized to charge the unpaid amount to Deposit Account No. 19-0741. If any extensions of time are needed for timely acceptance of papers submitted herewith, Applicant hereby petitions for such extension under 37 C.F.R. §1.136 and authorizes payment of any such extensions fees to Deposit Account No. 19-0741.

Respectfully submitted,

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By 

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